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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,650	01/14/2004	Patrick Evan Maupin	SILA.0009	3934

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EXAMINER	
FLORES, LEON	
ART UNIT	PAPER NUMBER
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/757,650	MAUPIN, PATRICK EVAN	
	Examiner	Art Unit	
	Leon Flores	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: In paragraph 15, line 14, the phrase *"characters is are left"* should be rewritten as *"characters are left"*. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims (1-20)) are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark, II et al (hereinafter Clark) (US Patent 5,686,912) in view of Cooklev (US Patent 6,289,130 B1), and further in view of Jaquette et al (hereinafter Jaquette) (US Patent 6,271,775 B1).

Re claim 1, Clark discloses a method for handling data transmissions, said method comprising: generating a codeword by compressing one or more incoming characters (See col. 3, lines 2-3); determining a cost difference between transmitting all codewords previously stored in said buffer and transmitting all characters previously stored in said buffer (See col. 3, lines (See col. 3, lines 8-15); in response to said determined cost difference being less than a low limit value, transmitting all characters previously stored in said buffer (See fig. 2: 50 & 54. Furthermore, if the compression coefficient is less than a threshold, it will switch to a raw/transparent/uncompressed mode.); in response to said determined cost difference being greater than a high limit value, transmitting all codewords previously stored in said buffer (See fig. 2: 56 & 60. Furthermore, if the compression coefficient is greater than a threshold, it will switch to a compressed mode.).

But the reference of Clark fails to specifically disclose storing said codeword and said one or more incoming characters in a buffer. However, Cooklev does. (See fig. 1: 114 & 118 & col. 6, lines 25-34) Clark discloses a data compression scheme which is compatible with V.42bis data compression standard. The data compression scheme provides an efficient algorithm to determine when as well how to efficiently switch between transparent and compressed modes to provide and facilitate an improved compression ratio. Additionally, a temporary buffer is provided for use by the encoder in determining which of either transparent or compressed modes provides a more efficient transfer of a portion of data.

Therefore, taking the combined teachings of Clark & Cooklev as a whole. It would have been obvious to one of ordinary skill in the art to have incorporated a the step of storing compressed data and uncompressed data in a buffter into the system of Clark, and as taught by Cooklev, for the benefit of providing a more efficient transfer of a portion of the data. (See abstract)

The combination of Clark & Cooklev, as discussed above shows the limitations claimed, except they do not specifically disclose that in response to said determined cost difference being inclusively between said low limit value and said high limit value, deferring data transmission from said buffer.

However, Jaquette does. (See fig. 2A: 206 & 208, & col. 5, lines 60-67, col. 6, lines 21-27, lines 37-58) Jaquette discloses a method of reducing data expansion during data compression. It allows the coding scheme used to compress data to be swapped between two or more coding schemes. According to figure 2A, if the compression potential is greater than a first threshold, which equals to the cost of switching from one coding scheme to another, it will switch to a uncompress mode. However, if this condition is not met, it will be compared to different value. If the compression potential is less than zero, it will switch to a compress mode. But, if this condition is not met, meaning that the compression potential fell in between zero and the first threshold, the system will enter in a stage where the compression potential will be compared to a second threshold. And this second threshold represents an "educated guess".

Therefore, taking the combined teachings of Clark, Cooklev, & Jaquette as a whole. It would have been obvious to one of ordinary skill in the art to have incorporated this step into the system of Clark, as modified by Cooklev, in the manner as claimed, and as taught by Jaquette, for the benefit of computing a new compression potential.

Re claim 2, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said method is implemented within a modem operating under the V.42bis standard. (In Cooklev, see col. 6, lines 22-23 & 56)

Re claim 3, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said transmitting all characters previously stored in said buffer further includes transmitting all characters previously stored in said buffer via a transparent mode. (In Cooklev, see fig. 2: 212)

Re claim 4, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said transmitting all codewords previously stored in said buffer further includes transmitting all codewords previously stored in said buffer via a compressed mode. (In Cooklev, see fig. 2: 209)

Re claim 5, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said low limit value is initially set to zero. (In Jaquette, see fig. 2A: 208, & col. 6,

lines 21-27)

Re claim 6, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said high limit value is set at a cost in bits for switching to a compressed mode and back to a transparent mode under the V.42bis standard. (In Jaquette, see fig. 2A: 208, & col. 6, lines 21-27. And in Cooklev, see col. 6, lines 22-23 & 56)

Re claim 7, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said deferring further includes deferring data transmission until a new cost difference is determined based on a subsequent codeword. (In Jaquette, see fig. 2A & see col. 5, lines 8-15)

Re claim 8, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said deferring further includes deferring data transmission until said buffer becomes full. (In Cooklev, see col. 8, lines 49-55)

Re claim 9, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said deferring further includes deferring data transmission until data is required to be flushed out of said buffer. (In Cooklev, see col. 8, lines 49-55. Furthermore, one skilled in the art would know that when the buffer becomes full it is necessary to flush out data.)

Re claim 10, the combination of Clark, Cooklev, & Jaquette further discloses that wherein said method further includes incrementally updating said cost difference as codewords and characters are sent to said buffer. (In Jaquette, see col. 5, lines 8-15, & col. 6, lines 17-20)

Claim 11 is a system claim corresponding to method claim 1. Hence, the steps performed in method claim 1 would have necessitated the elements in system claim 11. Therefore, claim 11 has been analyzed and rejected w/r to claim 1.

Claim 12 is a system claim corresponding to method claim 2. Hence, the steps performed in method claim 2 would have necessitated the elements in system claim 12. Therefore, claim 12 has been analyzed and rejected w/r to claim 2.

Claim 13 is a system claim corresponding to method claim 3. Hence, the steps performed in method claim 3 would have necessitated the elements in system claim 13. Therefore, claim 13 has been analyzed and rejected w/r to claim 3.

Claim 14 is a system claim corresponding to method claim 4. Hence, the steps performed in method claim 4 would have necessitated the elements in system claim 14. Therefore, claim 14 has been analyzed and rejected w/r to claim 4.

Claim 15 is a system claim corresponding to method claim 5. Hence, the steps performed in method claim 5 would have necessitated the elements in system claim 15. Therefore, claim 15 has been analyzed and rejected w/r to claim 5.

Claim 16 is a system claim corresponding to method claim 6. Hence, the steps performed in method claim 6 would have necessitated the elements in system claim 16. Therefore, claim 16 has been analyzed and rejected w/r to claim 6.

Claim 17 is a system claim corresponding to method claim 7. Hence, the steps performed in method claim 7 would have necessitated the elements in system claim 17. Therefore, claim 17 has been analyzed and rejected w/r to claim 7.

Claim 18 is a system claim corresponding to method claim 8. Hence, the steps performed in method claim 8 would have necessitated the elements in system claim 18. Therefore, claim 18 has been analyzed and rejected w/r to claim 8.

Claim 19 is a system claim corresponding to method claim 9. Hence, the steps performed in method claim 9 would have necessitated the elements in system claim 19. Therefore, claim 19 has been analyzed and rejected w/r to claim 9.

Claim 20 is a system claim corresponding to method claim 10. Hence, the steps performed in method claim 10 would have necessitated the elements in system claim 20. Therefore, claim 20 has been analyzed and rejected w/r to claim 10.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Flores whose telephone number is 571-270-1201. The examiner can normally be reached on Mon-Fri 7-5pm Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LF
February 28, 2007.

DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER